

ABSTRACT

Manufacturing industry is the sector that makes the largest contribution to the economy in Indonesia, but in 2017-2022 the percentage of its contribution tends to show a decline, which raises the question of whether the decline is caused by the declining efficiency and productivity of the manufacturing sector. Therefore, this study was conducted with the aim of calculating and analysing the level of technical efficiency and the growth of total factor productivity (TFPG) in the manufacturing industry in Indonesia from 2017 to 2022.

This research uses the SFA (Stochastic Frontier Analysis) method. In analyzing technical efficiency, the MLE (Maximum Likelihood Estimation) approach was used. In analyzing TFPG, the decomposition is done with 3 main components, namely TEC (Technical Efficiency Change), TC (Technical Change), and SC (Scale Change).

The results of the production function estimation using the translog model show that the technical efficiency value of the manufacturing industry experienced fluctuating growth throughout 2017-2022. The factors that influence technical efficiency in this study are industry size, capital output ratio (COR), and market share. The results also showed that the TFPG of the manufacturing industry in Indonesia in 2017-2022 experienced a downward trend, with the components that drove the increase were TEC and SC, while TC made a negative contribution.

Keywords: Technical Efficiency, TFPG, SFA, Manufacturing Industry